

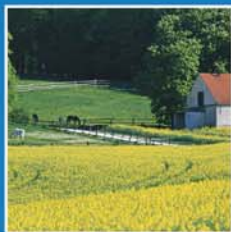
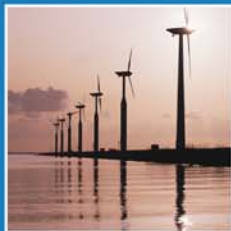
Kora Kristof  
Kristin Parlow  
Katrin Bienge

Wuppertal Institute for Climate, Environment and Energy

## Resource Efficiency Network

### Executive Summary

Summary report of Task 10 within the framework of the  
„Material Efficiency and Resource Conservation“ (MaRes) Project



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**Contact to the Authors:**

Dr. Kora Kristof / Katrin Bienge / Kristin Parlow

Wuppertal Institute for Climate, Environment and Energy  
D - 42103 Wuppertal, Döppersberg 19

Phone: +49 (0) 202 2492 -183, Fax: -198

Email: [kora.kristof@wupperinst.org](mailto:kora.kristof@wupperinst.org)

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**Project Coordination:**

Dr. Kora Kristof / Prof. Dr. Peter Hennicke

Wuppertal Institute for Climate, Environment and Energy  
42103 Wuppertal, Germany, Döppersberg 19

Phone: +49 (0) 202 2492 -183 / -136, Fax: -198 / -145

E-Mail: [kora.kristof@wupperinst.org](mailto:kora.kristof@wupperinst.org)

[peter.hennicke@wupperinst.org](mailto:peter.hennicke@wupperinst.org)

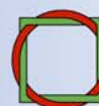
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# Resource Efficiency Network

## Executive Summary

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## 1 Resource Efficiency Network: Generating Momentum for a Resource-Saving Future in Germany

Both the German government’s national sustainability strategy, “Perspectives for Germany”, and the Resource Efficiency Network’s founding document stress that ecologically, economically and socially sustainable development in the twenty-first century requires a rapid increase in resource efficiency, an ecological New Deal. At the same time, the development and application of innovative, ecologically efficient processes and products and resource-saving services that make intelligent and sparing use of resources presents tremendous economic opportunities. The globally increasing need for resource-efficient products, technologies, processes and services holds great potential for business and employment, especially for Germany as a high tech country of business start-ups. “The markets of the future are green.” (Federal Environment Ministry, 2006, 10).

To develop these future markets and utilise them in the interest of sustainable development in Germany, it is essential to transcend the resource-intensive patterns of thinking and acting of the twentieth century and to replace them gradually by resource-saving patterns of production and consumption on a national and international scale. The Resource Efficiency Network was set up in March 2007 to intensify this process in Germany. The impetus to do so was provided by the following objective set out by the Federal Ministry for Environment, Nature Protection and Nuclear Safety: *“By 2020 our country will be the world’s most resource-efficient economy, a pioneer in careful and environmentally friendly treatment of energy and raw materials. Those are the markets of tomorrow”* (Sigmar Gabriel in his speech to the conference launching the Resource Efficiency Network, 2007).

Designed as a cross-sector, open and “learning” platform, the Resource Efficiency Network aims in the short to medium term to bring together existing know-how on more economical treatment of resources; to intensify communication and cooperation between actors from enterprises, industry associations, advisory and educational institutions, academia, politics and the media; and to mobilise their central competencies to create a broad awareness of the issue.

The Resource Efficiency Network has four central tasks:

- to promote more efficient use of resources for products and services in manufacturing, trade and consumption,
- to bring together actors from politics, business enterprises, industry associations, trade unions, academia and civil society and to coordinate their activities,
- to initiate the exchange of experience gained with promising approaches to efficient use of resources,
- to develop proposals for the design of framework conditions that provide incentives to use resources more efficiently and to remove obstacles that impede this.

The goal of Task 10 was to further develop, maintain and support the Resource Efficiency Network set up in 2007 with respect to concept, content and organisation. Here, the Wuppertal Institute as the coordinating institution collaborates with the North Rhine-Westphalia Efficiency Agency (EFA NRW) and the German Material Efficiency Agency (demea). Cooperation between these very differently positioned institutions is close and works well and hence represents a special, unique feature of the process and a key to its success.

In addition to further developing the Network’s design and orientation (see Chapter 2), joint tasks were to initiate and support activities and Network outputs that generate momentum, multipliers and dialogue (see Chapter 3) for the two target groups Enterprises and Multipliers. The activities initiated and carried out by the Resource Efficiency Network during the project yielded valuable experience in a broad range of areas. The lessons thus learnt about individual activities and target groups provide further input for the future work of the Network. The project also “evolved” structures that can be built on. As one of the central actors working to increase resource efficiency in Germany, the Resource Efficiency Network has helped to establish and strengthen communications and cooperation as well as interdisciplinary and of course personnel structures between business and industry, academia and politicians. The task now is to extend these strategically. In view of changing external circumstances (e.g., the global financial crisis) and new scientific findings and social developments, it makes sense to further develop the Network’s activities. An overview of proposals agreed between the partner institutions for future work is given in Chapter 4.

## 2 Direction and Definition of the Network Design

The main milestones in Task 10 were to further develop the Network design concept (i.e., the direction the Network’s strategy and programme should take), develop and implement various target-group activities and construct an Internet-based information platform. Agreement was reached at the start of the project on the direction Network strategy should take and what its activities should be, and target groups’ needs were identified. In consultation with the Federal Environment Ministry and the Federal Environment Agency the following preliminary steps were proposed:

- Draft a background paper entitled “Recommendations for Work in Heterogeneous Networks and the Implications for the Resource Efficiency Network” (Wuppertal Institute 2007). This document is available (in German) in the *to JOIN* section of the website under the heading *Netzwerkkonferenzen* at [www.netzwerk-ressourceneffizienz.de/to\\_join/netzwerkkonferenzen/zweite\\_konferenz](http://www.netzwerk-ressourceneffizienz.de/to_join/netzwerkkonferenzen/zweite_konferenz).
- Design, carry out and evaluate a survey of all Network members using a questionnaire on further development of the Network design (Wuppertal Institute 2008). This document (in German) can also be downloaded from the website under the heading *Netzwerkkonferenzen* at [www.netzwerk-ressourceneffizienz.de/to\\_join/netzwerkkonferenzen/zweite\\_konferenz](http://www.netzwerk-ressourceneffizienz.de/to_join/netzwerkkonferenzen/zweite_konferenz).



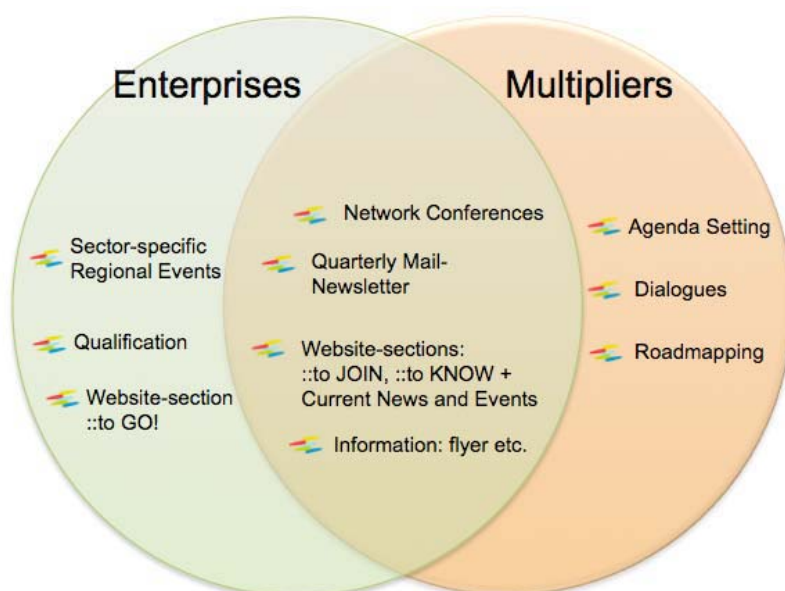
- Draft a paper entitled “Further Development of Proposals for the Network Design Based on an Evaluation of the Questionnaire” (Wuppertal Institute / EFA NRW / demea 2008). The paper and the detailed results of the questionnaire evaluation are available (in German) in the ::to JOIN section of the website under the heading “Ziele und Angebote” at [www.netzwerk-ressourceneffizienz.de/to\\_join/ziel\\_amp\\_angebote](http://www.netzwerk-ressourceneffizienz.de/to_join/ziel_amp_angebote).

In developing the Network design we identified two principal target groups for Network activities that need to be addressed quite specifically:

- **Enterprises** as direct implementers of resource efficiency. In particular, it is essential to empower and support SMEs in achieving a rapid increase in resource efficiency nationwide.
- **Multipliers** from the fields of politics, administration, industry associations, large corporations, academia, NGOs, media, advisory and educational institutions as promoters of implementation. These must all work together to make resource-efficient thinking and action the new social norm. Collaborating with actors that have their own structures and means of disseminating the idea of resource efficiency is therefore crucial.

In addition to those that are target group-specific, we also offer some network activities to all members. These are of equal interest to both member segments and will improve cooperation between the two target groups. Fig. 1 gives an overview of the Network’s activities.

Fig. 1: Overview of Network Activities 2007-2010



Source: Wuppertal Institute

It is important to involve Network members in designing activities by means of subject-specific surveys and also to evaluate actual implementation:

- Thus the above-mentioned survey of members supplied important indicators for further development of the Network design which were incorporated in 2008.
- In addition, the Wuppertal Institute in July 2009 carried out a statistical evaluation of website use in order to analyse the trend in user numbers and content accessed and to identify any need for improvement (see Chapter 3.5, Lessons Learnt). In the 04/2009 issue of our newsletter we asked all members for ideas about to make the design of the ::to GO! section more user-friendly. The ::to GO! section was then restructured in spring 2010 and re-launched in May 2010. A better-focused and clearer page and subject structure made it easier to navigate and more user-friendly.

### **Lessons learnt**

Taking stock of the three-and-a-half years' experience gained and using that experience to continually improve the Network design is important for the future development and definition process and hence a factor determining its success. Major lessons learnt are:

- Both target groups – Multipliers and Enterprises – should come from a broad range of institutions and should participate actively. The longstanding experience-based and structural knowledge offered by different actors and sectors and the regular exchanges taking place between them under the umbrella of the Resource Efficiency Network are fundamental to the success of the Network.
- A further key requirement is to involve all network members in identifying information and activity needs and thematic “hot spots”. This can be achieved via Network and regional conferences, but also by having an open Network design (“learning network”). Important conclusions can thus be drawn about how to tailor measures to address specific target groups while at the same time enhancing transparency and confidence in the Network. The impact of this approach is also manifest in the wide range of Network Resource Efficiency topics.
- Regular progress reports on ongoing processes and the attractive presentation of the results give members an overview of what has been achieved so far. This also allows their continuous active participation, facilitates diffusion of the messages and enhances the Network's public profile.
- Another important success factor is maintaining a close link between the Resource Efficiency Network and academic research on resource efficiency conducted in the context of the MaRes project coupled with support for the Network by significant actors who are already established in the resource efficiency field. This has made it possible to communicate the latest developments and findings from all fields speedily via the Network and to initiate specific processes along widely differing and broadly based target lines (e.g. road mapping processes, more in Chapter 3.4).



### **Network Design, Follow-up Activities: Thematic Campaigns, Internationalisation of Activities and Young NeRess**

The success factors outlined above provide a basis for a number of follow-up activities that might be used to further develop the Network design:

- **Focused thematic campaigns:** Development and design of thematic campaigns on leading technologies, products and strategies with high resource-efficiency potential, as identified in Task 1 of the MaRess project. Information on Task 1 and the results thereof can be downloaded from [http://ressourcen.wupperinst.org/info/entwd/index.html?beitrag\\_id=935&bid=9](http://ressourcen.wupperinst.org/info/entwd/index.html?beitrag_id=935&bid=9).
- **Internationalisation of activities:** It is also important to adopt an international outlook and to build international cooperation. Examples of how this might be done include:
  - international management of value chains,
  - exchange of ideas on successful national political strategies, innovative approaches and entrepreneurial good practice.
- **Young NeRess:** Another meaningful follow-up activity would be to integrate young economists, scientists and politicians in the conception of Network Resource Efficiency offerings and activities. Possible starting points are described in detail in Chapter 3.

## **3 Network Activities and Their Results**

In this chapter we describe the network activities for the Multipliers and Enterprises target groups and their outputs.

### **3.1 Network Conferences: A Concerted Effort to Achieve Greater Resource Efficiency**

Six Network conferences have been successfully held in Berlin. The main target groups were multipliers and large business enterprises. SMEs were addressed specifically by regional events. In each case the Wuppertal Institute developed the content and organisational concept, and the Institute's Berlin office was in charge of managing the event. Network conferences allow members to exchange ideas and to network and to communicate needs or obstacles regarding implementation of resource efficiency; they also provide an opportunity to agree on and initiate new activities. Each Network conference was designed for 100 participants and aroused a corresponding level of interest. The conference structure detailed in the Further Development of the Network Design Concept milestone included the following elements, which became established as a fixed sequence of events that received a positive rating from participants.

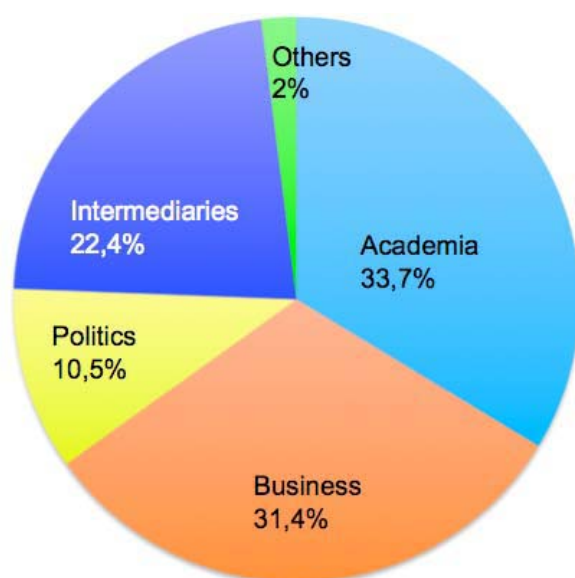
- **Welcoming remarks:** By way of introduction one or two new developments in resource efficiency and the Resource Efficiency Network were mentioned. At the conferences held so far, the welcoming remarks were delivered by the Parliamentary Secretary of State at the Federal Environment Ministry. In addition, the launch conference was addressed by the then Federal Environment Minister Sigmar Gabriel.
- **Good practice:** A round-table discussion of examples of good practice proved to be a good way of generating momentum. Successful examples from business enterprises were described and discussed in informal exchanges.
- **Present some Resource Efficiency Network activities:** A key success factor for developing the Network is to present the results and successes achieved by the Network, to exchange experiences and thus to initiate joint learning processes.
- **Spotlight:** After the launch conference establishing the Network in March 2007, each of the following five conferences focused on headline topics chosen to be of interest to as broad a section of members as possible:
  - The focus of the second conference (17 June 2008) was the Resource Efficiency Network one year on and financing resource efficiency activities. The Network’s past and future work was summarised and discussed and various funding possibilities were presented.
  - The third conference (29 January 2009) focused on successful networks and learning from the experience of other networks.
  - The fourth conference (26 June 2009) focused on qualification as a success factor for implementing resource efficiency. Approaches to qualification and successful examples were presented.
  - The fifth conference (15 April 2010) focused on leaps in innovation, the fast track to resource efficiency. Innovative approaches to increasing resource efficiency were presented and discussed.
  - The sixth conference (03 December 2010) will focus on successful implementation of resource efficiency and on which success factors are helpful.
- **Dialogue rounds:** The first survey of Network members found that intensive exchange and joint development of ideas was an important element. The rounds of dialogue on specific topics and strategic developments were held either as part of a plenary session or in different working groups whose findings were made available to all members for discussion.
- **Looking ahead:** Finally, representatives of the bodies responsible for the Network – i.e., the Wuppertal Institute and the Federal Environment Ministry – summarised the conference results and outlined what was to be done next.

Summaries of proceedings of the individual conferences, their programmatic content and the talks delivered are available in the :to JOIN section of the Resource Efficiency Network website under the heading *Netzwerkkonferenzen*.

## Lessons Learnt

The conference structure worked well and feedback from participants was extremely positive. The second to sixth Network conferences (see Fig. 2) were attended by a diverse group of interested parties that well reflects the Network’s two target groups.

Fig. 2: Composition of Participants at the Second to Sixth Network Conferences



Source: Wuppertal Institute

Many participants attended more than one conference. The Network conferences thus fulfilled their central objective as a platform for cross-sector information exchange and networking in the resource efficiency field. Many participants said they would like a longer time slot for informal exchange of information and ideas.

### Network conference follow-up activities: International conference, better integration of the younger generation, and support for PR campaign

The positive response and the large number of people accessing and downloading the documentation from the website is evidence of the broad interest in the Network conferences. The following modifications are recommended for future conferences:

- **International conference:** One meaningful follow-up activity would be to organise an annual international conference to build cooperation with international actors. Possible topics could be exchange of information on successful national political strategies, entrepreneurial approaches and good entrepreneurial practice.
- **Better integration of the younger generation:** So far, young scientists, politicians and intermediaries have been underrepresented at Network conferences. In future, special conference elements or special events could address this target group specifically. This will primarily involve building well-targeted cooperative

partnerships with universities and staging joint activities. The positive experience of collaborating with five universities in Task 1 of the MaRes project (Technical University Berlin, Technical University Darmstadt, Technical University Dresden, University of Kassel, RWTH Aachen University) may serve as a reference point. One proposal for future conferences is to get students to report on Network conferences from their own point of view (possibly also in blogs). Here the World Resource Youth Group, a student blog initiated by the Mercator Foundation of Switzerland to report on the World Resources Forum 2009 in Davos, might be a potential partner for the Resource Efficiency Network. The group still exists and is now run by students. For further information on the blog, please visit: [www.worldresourcesforum.org/wrfyg-blog](http://www.worldresourcesforum.org/wrfyg-blog).

- **Present conference material and results more attractively and creatively, thereby enhancing their publicity value:** Here one might consider closer cooperation with (communications) design departments (e.g. Bergische Universität Wuppertal, Folkwang University Department of Industrial Design) or agencies.

### 3.2 Regional Events: Resource Efficiency for Local Enterprises

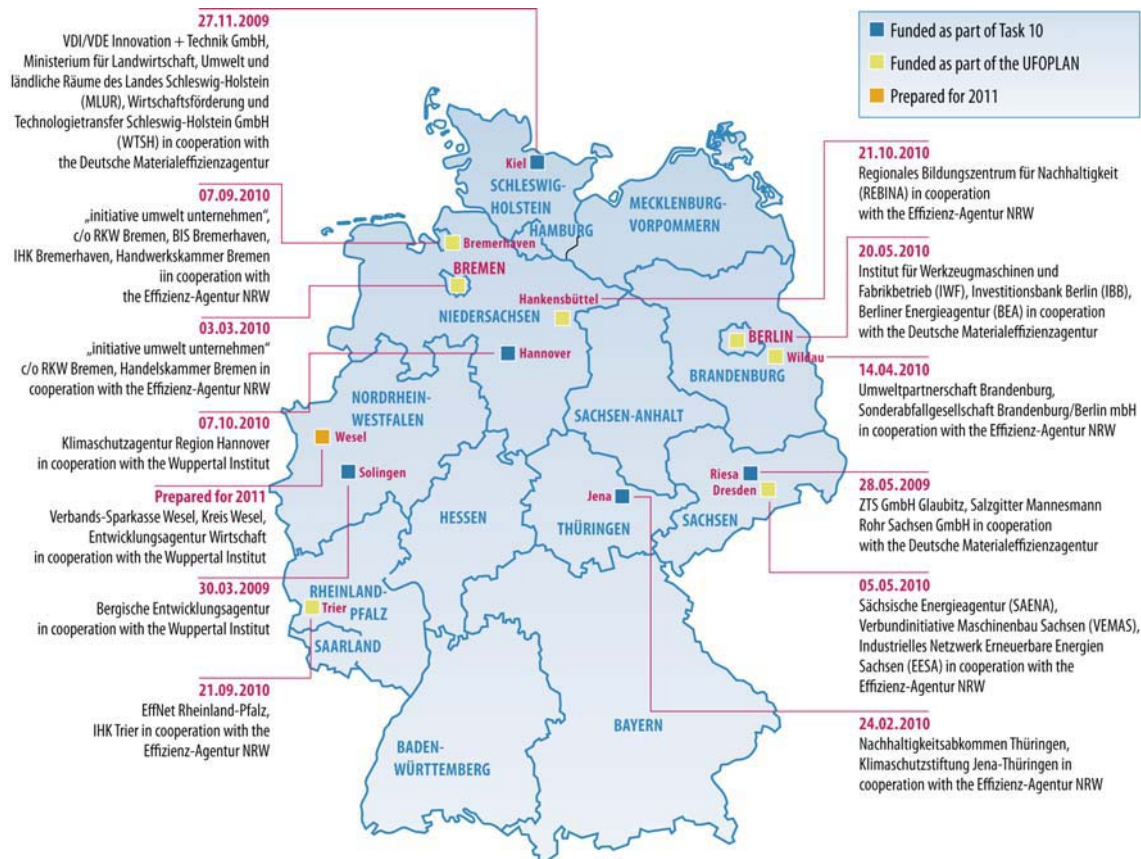
Twelve regional events in the series “Ressourceneffizienz für Unternehmen vor Ort” (Resource efficiency for local enterprises) especially for SMEs were held during the project and one additional was prepared for 2011 (see Fig. 3). Owing to the success of the first regional events and the importance of addressing people locally, in addition to six events supported by the Federal Environment Agency as part of Task 10, another seven regional events were funded as part of the Federal Environment Ministry’s environmental research plan (UFOPLAN) and run along identical lines.

Run under the motto “Tread new paths, save material and raw materials, spare resources and reduce costs at the same time,” these events

- provide information about the specific use of resources,
- present various successful examples from regional or sectoral business enterprises,
- offer help with implementation in business enterprises,
- provide information about the options for financing innovative technologies,
- provide stimuli for networking locally or in sectors.

The events were organised and run in close cooperation between initiators from the Network support bodies (Wuppertal Institute, EFA NRW and demea) and regional partners such as public or private intermediaries, industry associations, the German Chamber of Industry and Commerce (DIHK), the Federation of German Chambers of Trade (HWK), etc.

Fig. 3: Overview of Regional Events



Source: Wuppertal Institute / EFA NRW / demea

## Lessons Learnt

Both participants and organisers see regional events as important drivers of regional communication processes and activity structures on the subject of resource efficiency. The local resource efficiency programme structure was well received by participants and regional partners. The concept for organising regional events aimed to continue existing initiatives and include regional players already involved. This proved to be a sensible approach because it allows the Network to take advantage of its extensive experience and evolved contacts, thereby enhancing participants' identification with and trust in the event's co-providers. This is also a good way of coordinating the activities of different players and offerings, because it provides the necessary clarity for enterprises. Moreover, the integration of regional structures into Resource Efficiency Network activities aimed at intermediaries encourages synergy effects.

Nonetheless, the initiators' experience of staging these events differed widely from region to region. Where actor structures and activities concerning resource efficiency are already well established, it is possible to reach more enterprises successfully. The main industrial focus in a particular region played a role here, because resource-



intensive sectors recognised the relevance of the issue sooner. Great interest has been shown in the subject in regions such as Brandenburg and Dresden that are still “structurally weak” in terms of resource efficiency. However, additional efforts are needed here to recruit regional actors as long-term drivers of resource efficiency. This should be pursued more extensively as part of the follow-up activities.

### **Follow-up activities, regional events: Establish better networked regional structures for resource efficiency**

Participants and organisers repeatedly stressed their interest in and need for these regional events, so it would seem to make sense to continue holding them. However, on the basis of experience so far we recommend the following modifications:

- **Establish better networked regional structures for resource efficiency** in the “blank spots” of the resource efficiency landscape. To achieve this the Resource Efficiency Network should co-operate with relevant regional and sector-specific intermediaries in order to sound out what kind of support might be necessary and to utilise existing engagement (such as with chambers of industry and commerce, chambers of trade, or RKW rationalisation and innovation centres).

### **3.3 Dialogues: Initiating and Promulgating Resource Efficiency Jointly**

As a rule, it takes many parties to make specific economic processes more economical with resources: management and producers, the supply and demand sides, research and development, and policy-makers. Dialogue can set such processes in motion. Two dialogue processes were initiated as part of Task 10:

- **Industry dialogue between social partners on the resource efficiency of aluminium products:** The Resource Efficiency Network dialogue process – consisting of workshops, surveys and interviews – brought together representatives of the IG Metall engineering trade union and the German Aluminium Industry Federation (GDA), associated enterprises, works councils, the Federal Environment Ministry and the Network support in order to discuss the significance of resource efficiency of aluminium products along the value chain and throughout their life cycle. The aim of this two-stage process (conception, implementation) was to develop innovative approaches to promoting the resource efficiency of aluminium products in production and consumption. The project partners were the GDA, IG Metall and the Federal Environment Ministry. The dialogue process was organised by the UNEP/ Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (project management), Sustain Consult (conduct and analysis of interviews and questionnaires) and the Wuppertal Institute (cooperation with the Resource Efficiency Network). The project was supported via MaRes and the Hans Böckler Foundation. Detailed documentation and all the results can be found on the project website: [www.aluminium-ressourceneffizienz.de](http://www.aluminium-ressourceneffizienz.de).



- **IG Metall specialist dialogues in mechanical engineering and in the field of cross-sectional technologies, with works councils as the target group:** Resource efficiency – giving direction to progress and securing employment was the topic of the Resource Efficiency Network’s dialogue workshop with works councils, run jointly by IG Metall, the Federal Environment Ministry and the Resource Efficiency Network in April 2009. The workshop was preceded by numerous expert interviews with works council chairpersons, who contributed their experience to the discussion. Specialist support for the entire dialogue process was provided by the Wuppertal Institute and the IG Metall executive’s technology and environment section.

The central outcome of the dialogue process is a guide for works councils that is available as a printed document or a PDF file. It brings together scientific findings and the knowledge works councils have gained from experience and can help them take advantage of their rights to information and participation in the interest of a sustainable corporate policy. The guide can be downloaded from the Resource Efficiency Network website at [www.netzwerk-ressourceneffizienz.de/to\\_join/detail/entwd/index.html](http://www.netzwerk-ressourceneffizienz.de/to_join/detail/entwd/index.html).

- **Resource Efficiency-“Society” / Competence Pool Resource Efficiency:** Since summer 2010 different national institutions in the workfield of resource efficiency have been meeting on their own initiative on a quarter-annual basis with the superior goal of jointly foster resource efficiency in Germany and to promulgate the topic efficiently and effectively to relevant target groups. Besides the Resource Efficiency Network the following institutions participate on an operative level (status: november 2010): the RKW Kompetenzzentrum, the Effizienz-Agentur NRW, the Deutsche Materialeffizienzagentur, the Wuppertal Institute, the VDI/VDE Zentrum für Ressourceneffizienz, the DIHK and i.con innovations (ReMake). As a result of regular exchanges, improved inter-institutional coordination and a concerted development of joint activities synergies can be achieved and duplication of work can be avoided.

### **Lessons Learnt**

The participants’ positive response and the highly publicised results have made it clear that dialogue processes are an effective instrument for initiating examination of resource efficiency in other relevant fields, too. The keen personal engagement of various participants was supported by the Resource Efficiency Network. This helped to develop synergy effects.

### **Follow-up activities, dialogue: initiate further dialogues in resource-intensive sectors, continue joint activities within the resource efficiency-“society” / competence pool resource efficiency**

The Resource Efficiency Network offers a good framework for further dialogue in other areas where there is great potential for increasing resource efficiency. Other promising

areas are those where good contacts with possible participants already exist or there is scope to follow up on existing activities. The Network support is currently exploring possible dialogue in the areas of Green IT, resource efficient design and communication, though these have yet to be finalised. Additionally, the joint activities developed within the resource efficiency-“society” / competence pool resource efficiency pose an innovative and promising approach to achieve synergy effects. To successfully and efficiently promulgate the topic of resource efficiency in Germany, the cooperation should be continued based on a “Memorandum of Understanding”. Furthermore, if required, it should be institutionally strengthened by a systematic expansion of member institutions. The establishment of a national resource efficiency agency should be aimed at in the long run, combining existing competences under the umbrella of a single institution and hereby enhancing efficiency, effectivity and transparency of institutions in the field of resource efficiency.

### **3.4 Roadmapping: maps for opening up lead markets for resource efficiency**

Roadmaps are an instrument for the active design of technological developments and future markets. This type of map brings together many individual themes, identifies options for action and names priorities. Starting from the current state of technology, roadmaps supply information about the type, speed and direction of possible technological developments in enterprises and industries and visualise target-group-specific transfer activities. The goal of Task 9 of the MaRes project was to develop – jointly with industry and industry associations – integrated technology roadmaps for two Resource Efficiency Network road-mapping processes, with the aim of identifying lead markets with a high resource efficiency potential.

Dr. Siegfried Behrendt of the Institute for Futures Studies and Technology Assessment (IZT) gGmbH and Prof. Dr. Klaus Fichter of the Borderstep Institute for Innovation and Sustainability were in charge of the two roadmapping processes forming part of MaRes Task 9.

- The **Thin Client & Server-Based Computing** roadmap centres on the development of lead markets for energy- and material-efficient use of ICT. Server-based computing means that application programmes do not run on a terminal but on powerful central servers, and that the thin client (a small, compact terminal for computer work stations) accesses them from there.
- The **Resource-Efficient Photovoltaics** roadmap aims to open up lead markets for photovoltaic products, focusing on early recognition of raw material requirements and shortages, reducing production costs, and recycling.

The final report on Task 9 can be downloaded from <http://ressourcen.wupperinst.org/downloads/index.html>.

### 3.5 Website: News and Information at a Click

Another central milestone in Task 10 was designing and setting up the Resource Efficiency Network website. The goals set out in the application included providing information on the Network’s activities (including dates), agenda setting and finding ways to publicize resource efficiency as effectively as possible, presenting examples of good practice, and providing lists of thematic links (including links to funding options, advisory institutions, implementation tools, etc.).

The Wuppertal Institute developed and realised the concept for the website structure, provided scientific support and drafted text in coordination with the Federal Environment Ministry and the Federal Environment Agency. The communications consultancy Martin Feldmann in Wuppertal was responsible for conceptual support and website design, while the technical realisation was done by the *oundmdesign – maikranz ohnesorge gbr* design agency. The Wuppertal Institute maintained the website using the Typo 3 content management system.

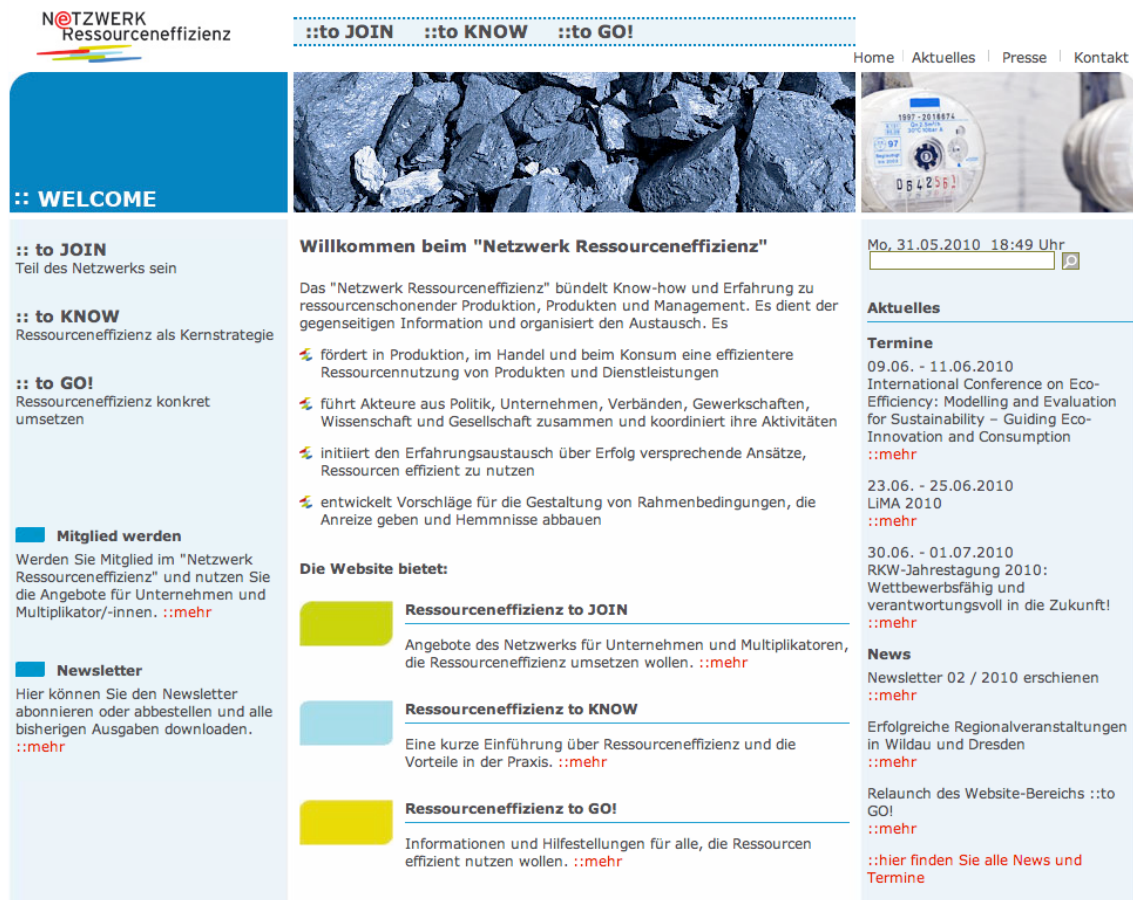
The website is divided into three main content sections with subpages. It also includes an overview of current events and news along the right-hand margin (see Fig. 4):

- **::to Join – being part of the Network:** This area has information, documentation, downloads and links relating to the goals, offerings and activities of the Resource Efficiency Network (Network conferences, regional events, dialogues, qualification, newsletters, etc.).
- **::to KNOW – resource efficiency as a core strategy:** This section contains extensive information, facts and figures as well as resource efficiency links. *Politikoptionen* provides an overview of political measures and strategies to promote resource efficiency. *Unternehmensoptionen* gives an overview of crucial starting points for implementing resource efficiency in business enterprises.
- **::to GO! – Implementation of resource efficiency in practice:** This area is the real heart of the website, where under the headings *Informationen & Tools*, *Bildungsangebote* (Training), *Förderangebote* (Funding) and *Auszeichnungen* (Awards), users can access all approaches, offerings and examples to enable them to start implementing resource efficiency in their own context straight away.

#### Lessons Learnt

The creative and attractive layout of the website won praise in many quarters, and counter showed a continuous increase in user numbers and in the intensity of use of the website. The ::to JOIN area and the current news and events were visited especially frequently, followed by the ::to KNOW and ::to GO! areas. In spring 2010 the ::to GO! area was restructured to make it easier to navigate and more user-friendly.

Fig. 4: The Resource Efficiency Network Website



Source: Wuppertal Institute

### Website follow-up activities: English short version, Web 2.0, Wikipedia

- **English short version:** The core areas and information of the website should be translated into English for international users. This is also relevant regarding the internationalisation of activities.
- **Web 2.0:** Podcast (interactive good practice area), activities in social networks (Facebook, XING, etc.).
- **Wikipedia:** Write an article on resource efficiency, identify where there is a need to augment existing subject areas, close gaps.

### 3.6 Qualification: No Implementation without Sufficient Know-How

Qualification plays a crucial role in achieving resource efficiency aims and was therefore explicitly included on the agenda of the second and fourth Network conferences. Enabling (future) employees and managers to anchor resource efficiency firmly in their thinking and behaviour in their specific contexts is very important. Since learning processes do not take place overnight and rarely lead to immediate changes in behaviour, it is all the more important to build and expand opportunities for people to obtain additional qualifications in resource efficiency as quickly as possible.

At the second Network conference, the dialogue round on qualification and tools discussed three Resource Efficiency Network activities in detail and identified specific strategies for putting these into practice:

- Design a Resource Efficiency course of study,
- Develop partnerships with SMEs,
- Conduct research project on qualification and personnel development concepts.

The details of each dialogue round can be downloaded from the ::to JOIN area of the website under the heading *Netzwerkkonferenzen* (Network conferences). They are to be found on the second conference page in the document marked *Protokoll* (minutes).

The main topic of the **fourth conference** was qualification as a factor in successfully implementing resource efficiency. A number of researchers and practitioners talked about the need for qualifications and about existing approaches. For example, one contributor presented a simplified overview of qualification options focusing on resource efficiency (Knowledge roadmap, “Qualification Options for Resource Efficiency”), including the energy efficiency ambassador model as an approach that might be applied to resource efficiency. Also presented were the findings of a project at the Industrial Design Department of Folkwang University that took resource efficiency as a starting point for a course on product design. The conference proceedings can be downloaded from the ::to JOIN section of the website, under the heading *Netzwerkkonferenzen*, where they are on the page for the fourth conference. A detailed description of other MaRes activities on the subject of qualification and resource-efficient design can be found in the results of MaRes Steps 13.2 and 13.3 at <http://ressourcen.wupperinst.org/downloads/index.html>.

**The training project Resource Efficiency at Work** developed by the German trades union federation DGB, its educational section DGB Bildungswerk e.V. and the Federal Environment Ministry in May 2008 is to be the Resource Efficiency Network’s core qualification project, its goal being to elaborate a continuing education concept for material and energy efficiency in companies. For further information, please visit: [www.einblick.dgb.de/hintergrund/2008/09/intro\\_ressourcen.htm/](http://www.einblick.dgb.de/hintergrund/2008/09/intro_ressourcen.htm/).

## Lessons Learnt

There should also be a continued focus on stimulating, developing and disseminating training, further education and continuing education programmes in resource efficiency in a wide range of professions and at a wide range of levels.

### **Follow-up activities, qualification: qualification for consultants, financial managers and other intermediaries, summer schools**

- Draw up and launch **qualification programmes for consultants, the banking sector and other intermediaries**: SMEs in particular often have financial difficulty with investing in resource-efficient technology and need competent advice and useful support. To be able to provide this advisory agencies such as financial institutions must pay more attention to educating their employees about resource-efficiency potential, instruments and technologies. There is an urgent need for action in this area. This topic could easily be incorporated into regional events.
- **Summer Schools**: The model here is two international summer schools on Industrial Design. The first took place in 2009 under the heading 1st Sustainable Summer School and the second, held in 2010, was devoted to the topic Society, Systems and Swarms. Running summer schools on resource efficiency themes is an important educational component, especially with Young NeRes in mind. Further information about the above summer schools is available at [www.designwalks.org](http://www.designwalks.org).

## **3.7 Agenda Setting: Communicating Trends and Providing Motivation**

With the aim of disseminating knowledge about and specific approaches to resource efficiency more widely and increasing accessibility both to target groups and to the general public, various agenda-setting activities were implemented as part of Task 10:

- Website,
- Communications campaign as outlined in MaRes Task 13 on resource efficiency,
- Qualification.

## Lessons Learnt

Our positive experience with the website and with our qualification programmes suggest that these should now be expanded. The next organisational step in the resource efficiency campaign will be to establish the idea and put it into practice.

### **Follow-up activities, agenda setting: build media partnerships**

- Develop media partnerships and general press and media work to support the resource efficiency campaign.



### 3.8 Information: Arouse Curiosity and Raise Awareness

A wide range of information in different formats was prepared as part of Task 10. Central elements, in addition to the website, are the quarterly **Mail Newsletter**, subject-specific **Special Newsletters** and separate bulletins on important news and events. The newsletter is composed on the basis of regular online research and of new, relevant information obtained from the MaRes consortium and other actors in the resource efficiency field. The newsletters are sent, using the Typo 3 content management system and with the Resource Efficiency Network as the sender (newsletter@netzwerk-ressourceneffizienz), to all members of the Resource Efficiency Network in business, academia, politics, civil society and the media. All newsletters and special newsletters can also be downloaded as PDF files from the website. The Wuppertal Institute is responsible for editorials and graphics and for posting the individual articles on the website. Between January 2009 and December 2010, nine regular newsletters and two special newsletters were published. Following the structure of Network conferences, the newsletter comprises the following subject areas:

- **From the Network:** News about the work of the Resource Efficiency Network.
- **Local resource efficiency:** News about regional resource efficiency activities (e.g. good practice, reports on regional events).
- **National resource efficiency:** News and developments in business and industry, politics and research concerning all aspects of resource efficiency at the national level.
- **International resource efficiency:** News and developments in business and industry, politics and research concerning all aspects of resource efficiency at the international level.
- **Successful implementation:** News and good practice examples from business enterprises, politics and research that generate special momentum or open up innovative approaches and perspectives.
- **Service:** This category includes the headings *Termine* (dates), *Im WWW* (on the Web) and *Gedruckt* (printed material), each with current information and new publications).

The first special newsletter on Green IT was published to coincide with CeBIT 2009. The second, published after the big MaRes conference “Resource Efficiency – Motor for Green Growth”, was devoted to films on resource efficiency that use creative visual approaches to bring the message of resource efficiency home to a broad general public. In addition, a panel discussion held at “**Natural Resources Day**” – an event organised by the Federal Environment Agency on 16 September 2009 alongside the World Resources Forum in Davos – introduced the Resource Efficiency Network and explained its added value from the point of view of initiators and partners. Further information is available at [www.umweltbundesamt.de/ressourcen/faktor-x/tag.htm](http://www.umweltbundesamt.de/ressourcen/faktor-x/tag.htm).

Information on the goals and offerings of the Resource Efficiency Network is also provided in **flyers** produced in German and English for the two target groups, Business Enterprises and Multipliers. In addition, invitation and programme flyers were produced for each of the six Network conferences and fourteen regional conferences. The Wuppertal Institute designed the content of the flyers and the Institute's VisLab was responsible for the graphics. A large quantity of flyers was printed for display at events. The flyers can also be downloaded from the website as PDF files.

In addition, the Wuppertal Institute in cooperation with VisLab produced a **poster** for the fifth Network conference with the heading “**The Resource Efficiency Network Three Years On: Activities for a Resource-saving Future**” giving an overview of the Network's work.

To enable interested parties to register as members on the spot at Resource Efficiency Network events or those of its partners, and to offer a non-web option, the Wuppertal Institute produced **membership application to GO! postcards**, which were also sent to Resource Efficiency Network partner institutions to display.

The Resource Efficiency Network also offers **telephone and e-mail support for members** via the account [info@netzwerk-ressourceneffizienz.de](mailto:info@netzwerk-ressourceneffizienz.de).

### **Lessons Learnt**

While there is certainly a demand for information, this must be actively promoted and disseminated.

### **Follow-up activities, information: continue approaches that have proven successful**

The kinds of information currently provided have proven effective and are well established, so we should continue to work with them.

## **4 Summary of Proposals for Follow-up Activities**

Fig. 5 summarises the follow-up activities considered useful for the period 2011–2012.

Fig. 5: Overview of Follow-up Activities for the Period 2011–2012

